WHAT IS CLAIMED IS:

1 .   An image compression apparatus for processing color
imaging signals outputted from a solid-state imaging device
having a color filter having a predetermined color
arrangement disposed on a light receiving surface thereof,
said image compression apparatus comprising:

a pre-processing means for effecting preprocessing
to generate color imaging signals of locations spatially
equivalent to the relative locations of pixels on said color
filter from the color imaging signals outputted from said
solid-state imaging device and to convert said color
imaging signals into a predetermined arrangement format
color by color with keeping color space of the color filter
so as to generate image data groups; and

an image compression means comprising a frequency
converting section for treating an image data group arranged
in said predetermined arrangement format as one unit to
compute spatial frequency components within the one unit, a
quantizing section for quantizing the spatial frequency
components, and a coding section for coding the quantized
spatial frequency components.

2 .   The image compression apparatus according to claim
1, wherein said pre-processing means sets said spatially

equivalent location as a location interiorly dividing a line

segment connecting two locations next to each other of a

color into an integral ratio and interpolates a color

imaging signal at the set location from color imaging

signals corresponding to the two locations next to each

other of a color.

3 .   The image compression apparatus according to claim

2, wherein said pre-processing means is formed so that the

total of numbers in said integral ratio is some integer

power of 2.

4 .   The image compression apparatus according to claim

3, wherein said pre-processing means is formed so that said

integral ratio is 1:3.

5 .   The image compression apparatus according to claim

1, wherein said pre-processing means extracts chromatically

identical color imaging signals from the color imaging

signals and rearranges them into said predetermined

arrangement format.

6 .   An image compression apparatus for processing color

imaging signals outputted from a solid-state imaging device

having a color filter having a predetermined color

arrangement disposed on a light receiving surface thereof, said image compression apparatus comprising:

a pre-processing means for treating a plurality of chromatically identical color imaging signals with keeping color space of the color filter contained in a predetermined region as one unit to compute spatial frequency components in the one unit with a linear operation;

a quantizing section for quantizing the spatial frequency components; and

a coding section for coding the quantized spatial frequency components.

7. The image compression apparatus according to claim 6, wherein said pre-processing means generates color imaging signals of locations spatially equivalent to the relative locations of pixels on said color filter from color imaging signals and effects the computation processing of said spatial frequency components based on the generated color imaging signals.

8. The image compression apparatus according to claim 7, wherein said pre-processing means sets said spatially equivalent location as a location interiorly dividing a line segment connecting two locations next to each other of a color into an integral ratio and interpolates a color

imaging signal at the set location from color imaging signals corresponding to the two locations next to each other of a color.

9. The image compression apparatus according to claim 8, wherein said pre-processing means is formed so that the total of numbers in said integral ratio is some integer power of 2.

10. The image compression apparatus according to claim 9, wherein said pre-processing means is formed so that said integral ratio is 1:3.

11. The image compression apparatus according to claim 6, wherein said pre-processing means rearranges the chromatically identical color imaging signals in the color imaging signals into a predetermined arrangement format and then effects the computation processing of said spatial frequency components.

12. An image processing system comprising:
an image compression apparatus for processing color imaging signals outputted from a solid-state imaging device having a color filter having a predetermined color arrangement disposed on a light receiving surface thereof,

said image compression apparatus comprising a pre-processing

means for effecting preprocessing to generate color imaging

signals of locations spatially equivalent to the relative

locations of pixels on said color filter from the color

imaging signals outputted from said solid-state imaging

device and to convert said color imaging signals into a

predetermined arrangement format color by color with

keeping color space of the color filter so as to generate

image data groups, and an image compression means containing

a frequency converting section for treating an image data

group arranged in said predetermined arrangement format as

one unit to compute spatial frequency components within the

one unit, a quantizing section for quantizing the spatial

frequency components, and a coding section for coding the

quantized spatial frequency components;

an expansion means comprising a decoding section for

decoding spatial frequency components from code data

outputted from the image compression apparatus, an inverse

quantizing section for effecting an inverse quantization of

the decoded spatial frequency components, and an inverse

frequency conversion section for computing imaging data

color by color based on the inverse-quantized spatial

frequency components; and

an image data generation means for simultaneously

processing the imaging data of each color outputted from the

expansion means to generate image data.

13.   An image processing system comprising:

an image compression apparatus for processing color imaging signals outputted from a solid-state imaging device having a color filter having a predetermined color arrangement disposed on a light receiving surface thereof, said image compression apparatus comprising a pre-processing means for treating a plurality of chromatically identical color imaging signals with keeping color space of the color filter contained in a predetermined region as one unit to compute spatial frequency components in the one unit with a linear operation, a quantizing section for quantizing the spatial frequency components, and a coding section for coding the quantized spatial frequency components;

an expansion means comprising a decoding section for decoding spatial frequency components from code data outputted from the image compression apparatus, an inverse quantizing section for effecting an inverse quantization of the decoded spatial frequency components, and an inverse frequency conversion section for computing imaging data color by color based on the inverse-quantized spatial frequency components; and

an image data generation means for simultaneously processing the imaging data of each color outputted from the

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expansion means to generate image data.